

In The United States Patent And Trademark Office

Applicant: Vilho Nissinen et al.

Date:

Date Filed: March 8, 2005

Docket No.: BERGPAT-6

App. No.: 10/501,607

Art Unit: 4172

For: Nozzle Array

Examiner: X. Zhao

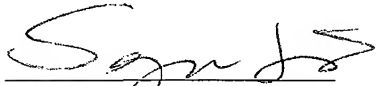
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CFR 1.132 Declaration Traversing Rejection

Declaration of Mr.: Seppo Luomi

1. I have worked in Metso Paper since 1982 as a R&D engineer and R&D Manager. My main area of responsibility has been research and development of pigment coating technology. I have been participating, following and managing the development of spray coating technology from the beginning and have worked as the superior of Vilho Nissinen who has been responsible for the development of spray technology.
2. I have got acquainted with the above mentioned patent application.
3. High pressure spray coating technology has been actively developed in Metso Paper, Inc. from 1994. At the date of the present invention, several inventions had already been made and patented. The basic patent for spray coating is FI 108061 (in the patent family there are also patents US 6063449 and US 6106902). However, no commercial solutions had been launched. One of the reasons for this was that it was considered that the coating layers obtained were not sufficiently even. It was known that very many different factors affect the evenness of layer in this relatively complex coating process. Different experiments were made, but no sufficiently good measures to solve this problem were found. Different nozzles from different manufacturers were also used.
4. Then the present inventors got the idea of studying closer the nozzles. Surprisingly they found that the properties, especially the area of opening, of the nozzles even in one manufacturing lot varied very much. First it was thought that quite great amounts of nozzles should simply be thrown away. This would have significantly increased the costs of the method. Then the inventors got the idea of classifying the nozzles as described in the present application. Experiments showed that this kind of new criterion for classification worked also in practice. A specific device for measuring and classifying the nozzles was also developed.
5. After the present invention it was considered that spray coating technology was ready for the markets, and the first commercial process started in January 2003 (Albbruck paper mill in Germany, Paper machine 5)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



Mr. Seppo Luomi
M.Sc. (Techn.)
R&D manager
Coating and Calendering

Date September 5, 2008